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FIG. 1A

Protein Fractionation on Various Resins

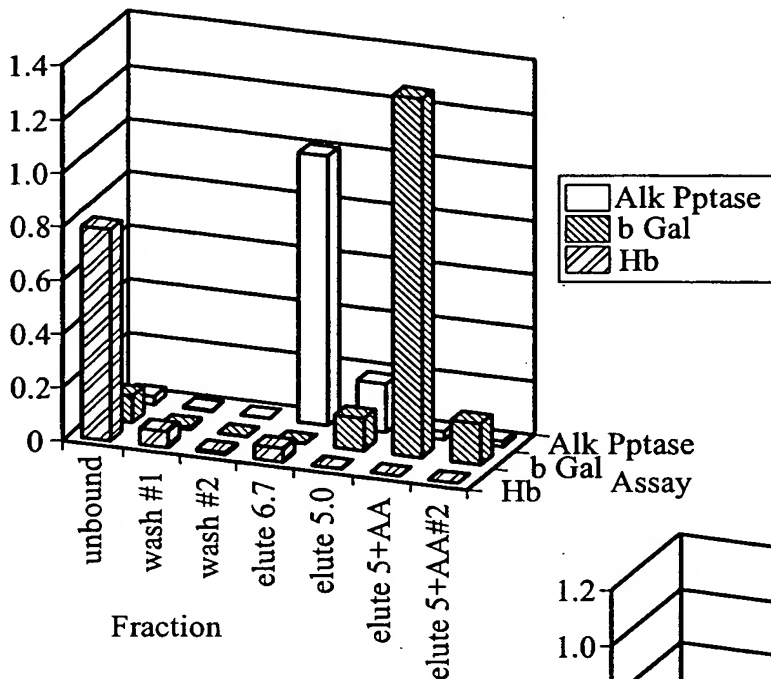


FIG. 1B

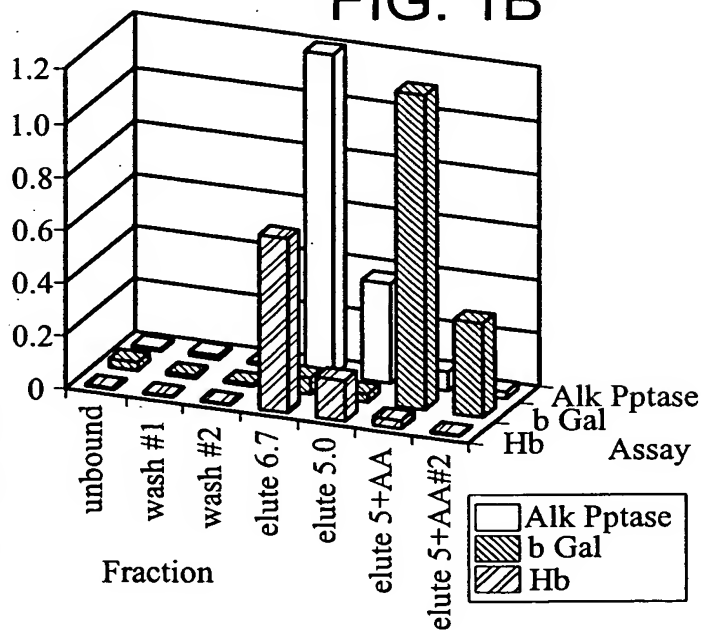
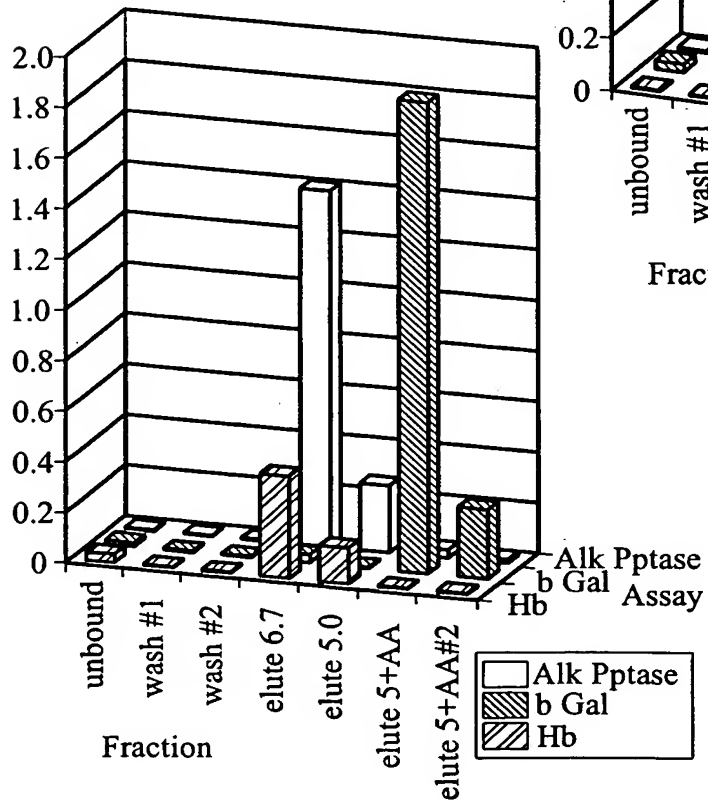


FIG. 1C



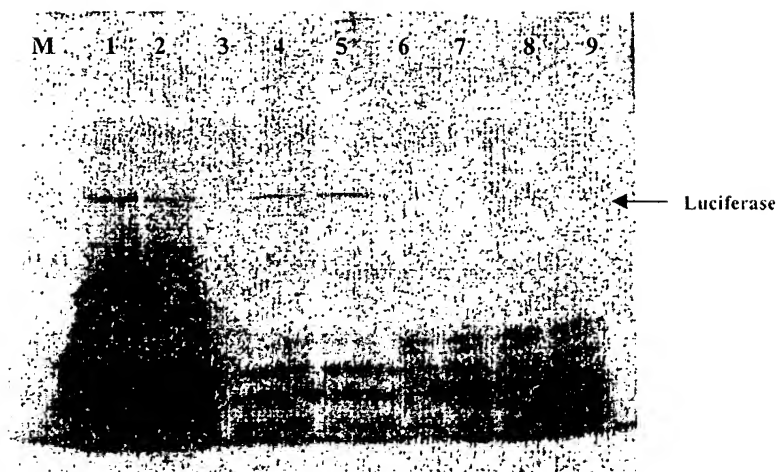


FIG. 2

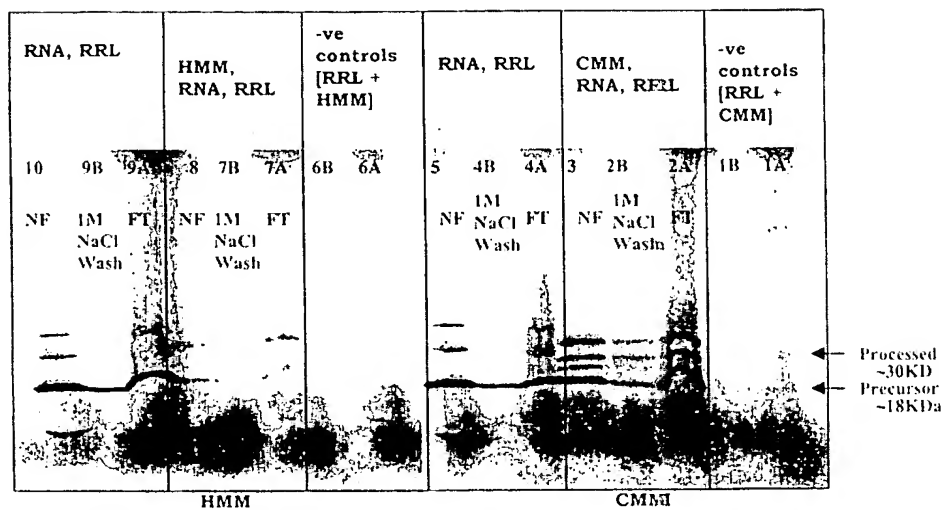


FIG. 3A

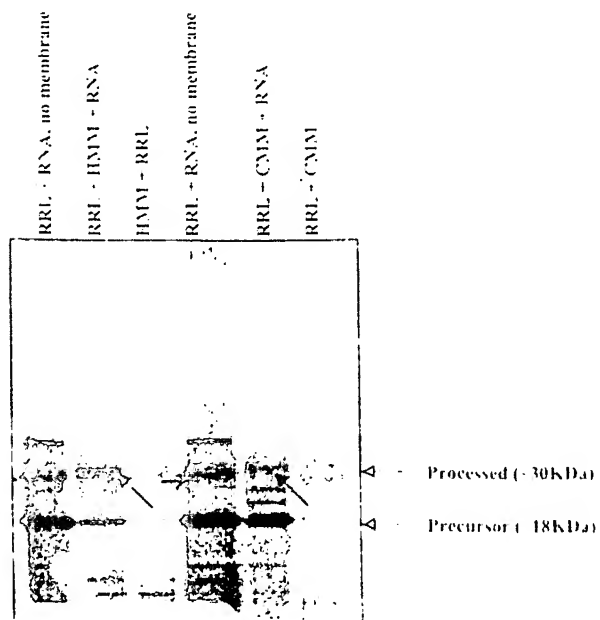


FIG. 3B

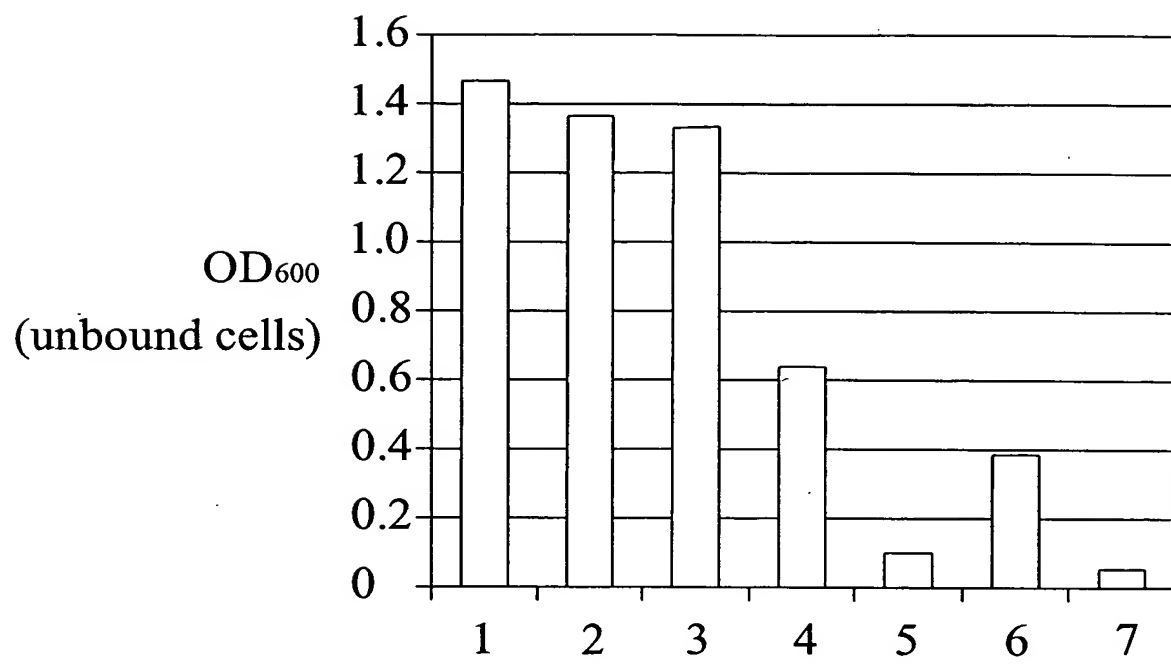


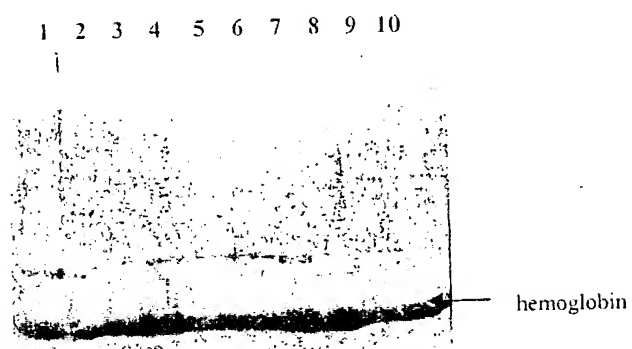
FIG. 5

Purification of His-RNaseH1 on Nickel NTA-Modified
Silica Magnetic Particles



FIG. 6

Purification and Separation of Hemoglobin



Lanes 1: Control lysate (before treatment)
2: Molecular weight markers
3: Nickel 100mM imidazole elution
4: Copper 100mM imidazole elution
5: Cobalt 100mM imidazole elution
6: Zinc 100mM imidazole elution
7: Nickel 500mM imidazole elution
8: Copper 500mM imidazole elution
9: Cobalt 500mM imidazole elution
10: Zinc 500mM imidazole elution

Purification of His-RNaseHl

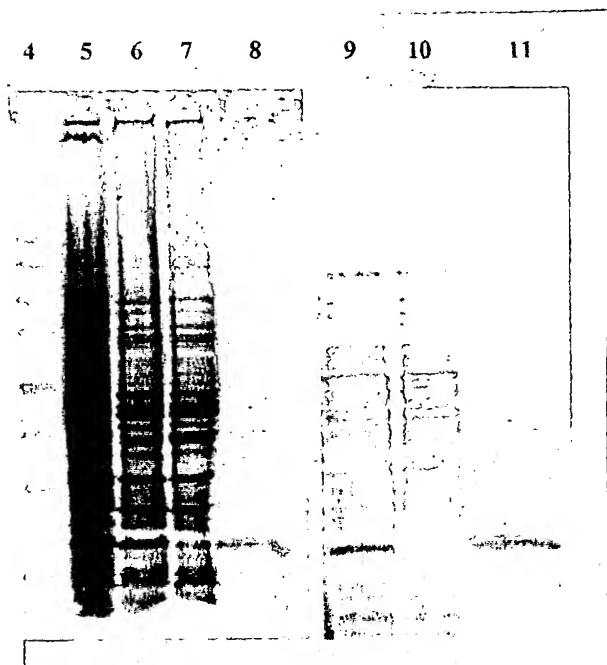


FIG. 8

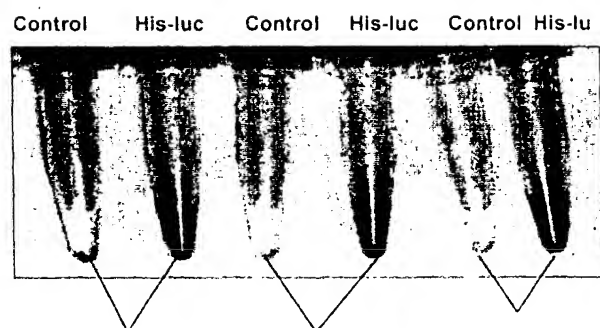


FIG. 9A

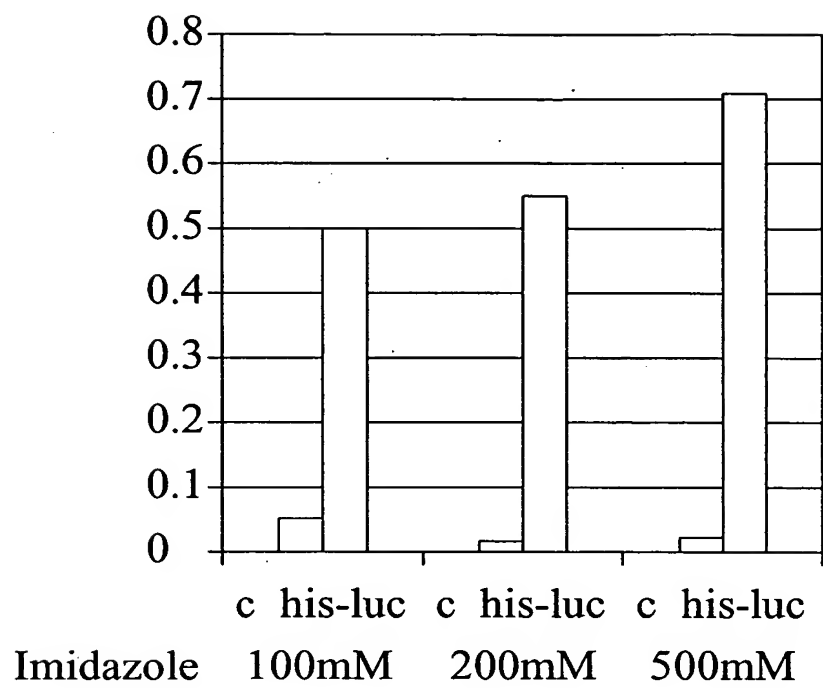
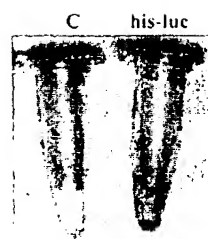


FIG. 9B



500mM imidazole elution

FIG. 9C

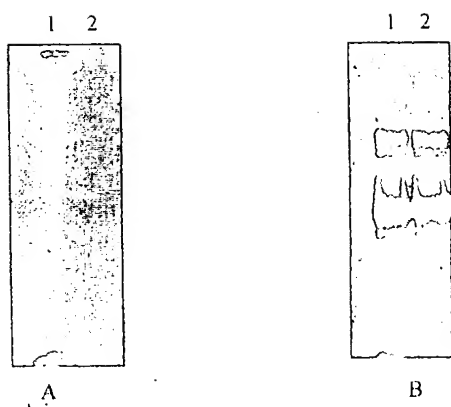


FIG. 10

1 2 3 4

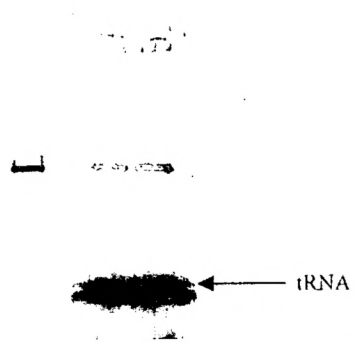


FIG. 11

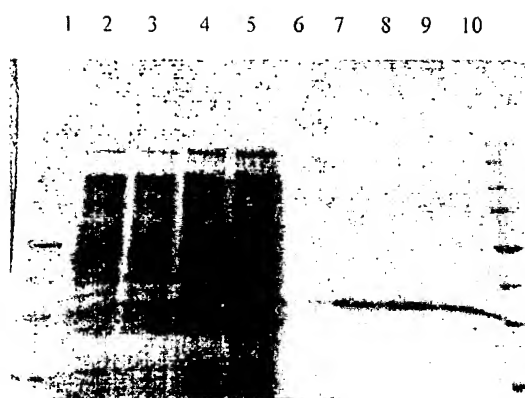
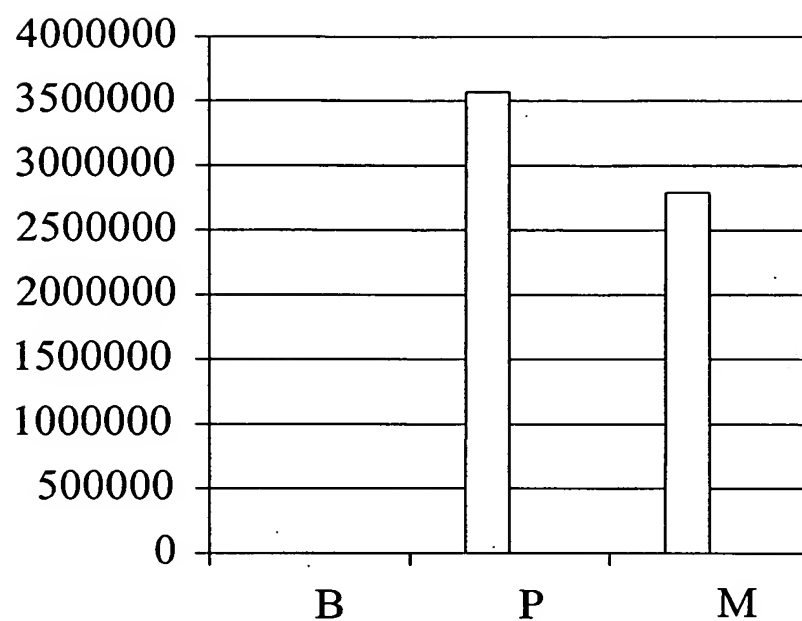


FIG. 12



B = Blank

P = Purified his-methionyl tRNA synthetase

M = Particle attached his-methionyl tRNA synthetase

FIG. 13

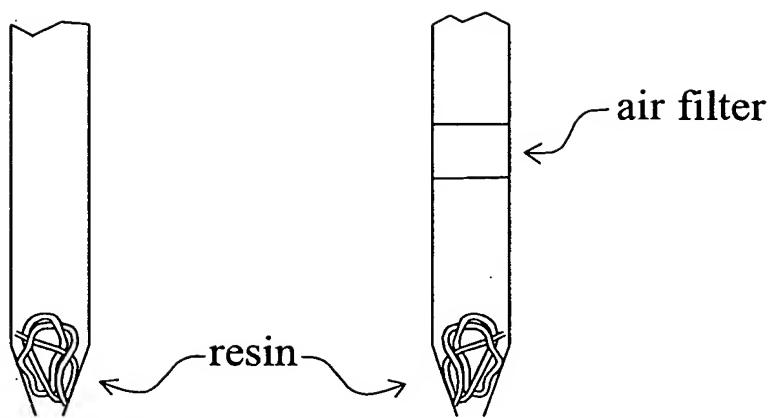


FIG. 14

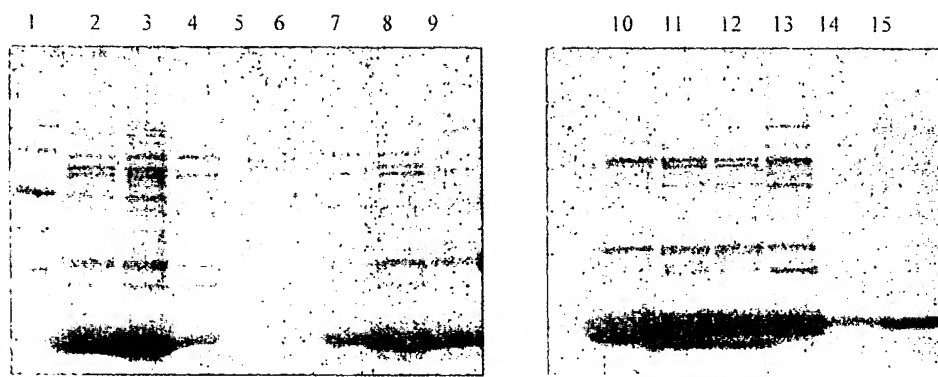
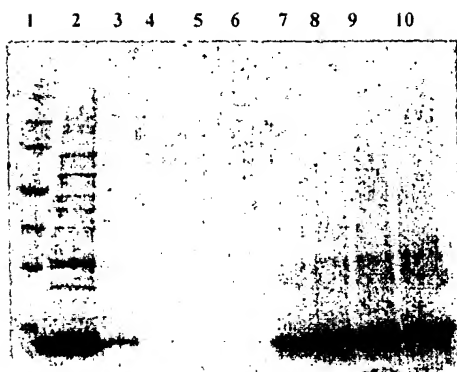


FIG. 15

FIG. 16A



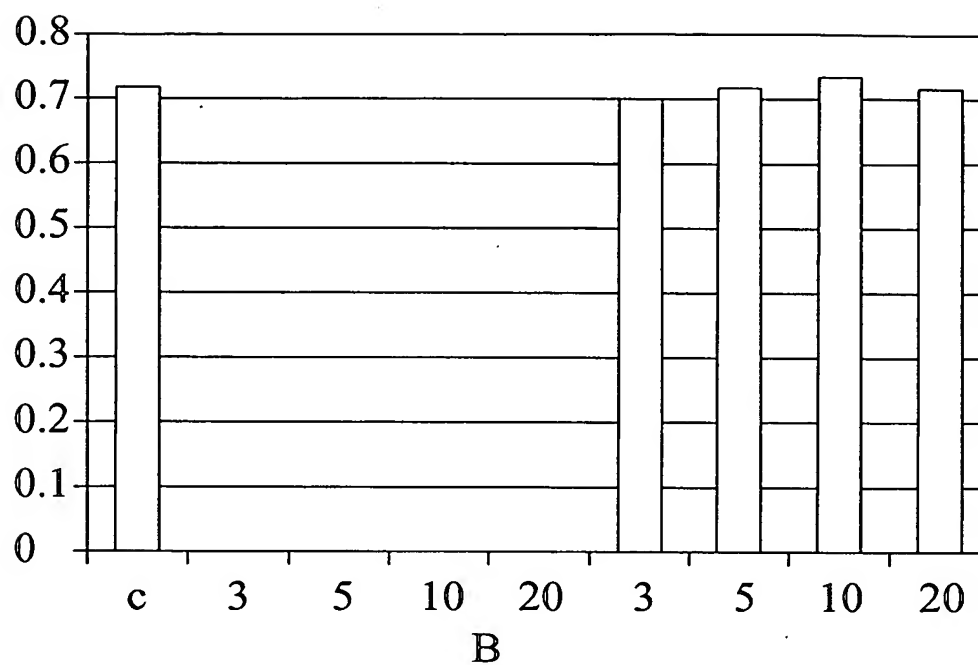


FIG. 16B

B. Protein concentration

C. Rabbit reticulocyte lysate (RRL) control

1. 3 μ l RRL flow through

5. 5 μ l RRL flow through

10. 10 μ l RRL flow through

20. 20 μ l RRL flow through

1. 1 μ l RRL elute

5. 5 μ l RRL elute

10. 10 μ l RRL elute

20. 20 μ l RRL elute

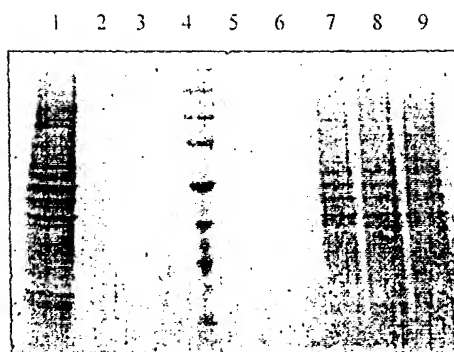


FIG. 17A

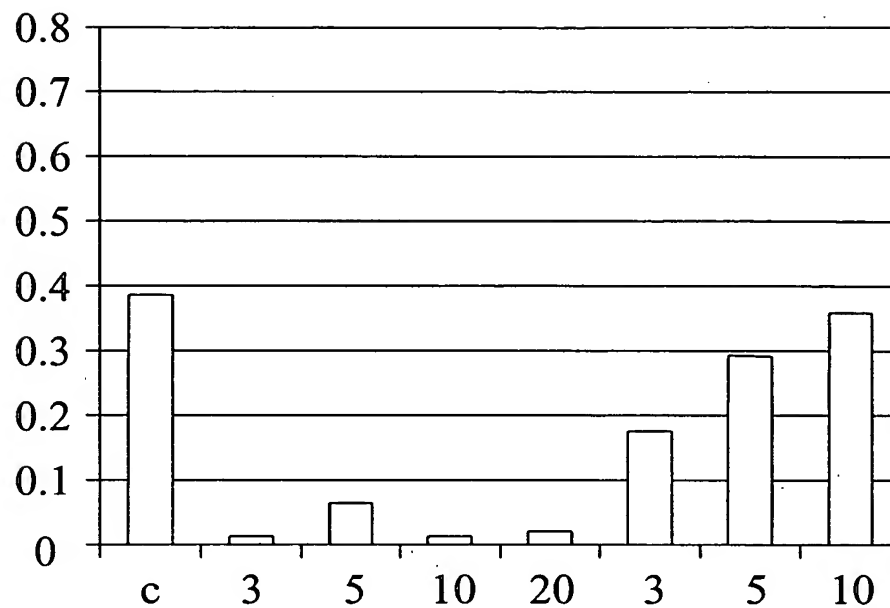


FIG. 17B

B. Protein concentration

C. CHO cell lysate control

1. 3 μ l CHO cell lysate flow through

5. 5 μ l CHO cell lysate flow through

10. 10 μ l CHO cell lysate flow through

20. 20 μ l CHO cell lysate flow through

1. 1 μ l CHO cell lysate elute

5. 5 μ l CHO cell lysate elute

10. 10 μ l CHO cell lysate elute

FIG. 18A

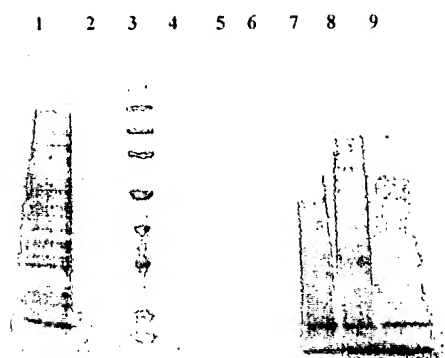


Fig. A. Binding and elution of complex mixture of proteins from copper-MagneSil particles

- Lanes: 1. Wheat germ lysate control
2. 3 μ l wheat germ lysate flow through
3. Marker
4. 5 μ l wheat germ lysate flow through
5. 10 μ l wheat germ lysate flow through
6. 20 μ l wheat germ lysate low through
7. 1 μ l wheat germ lysate elute
8. 5 μ l wheat germ lysate elute
9. 10 μ l wheat germ lysate elute

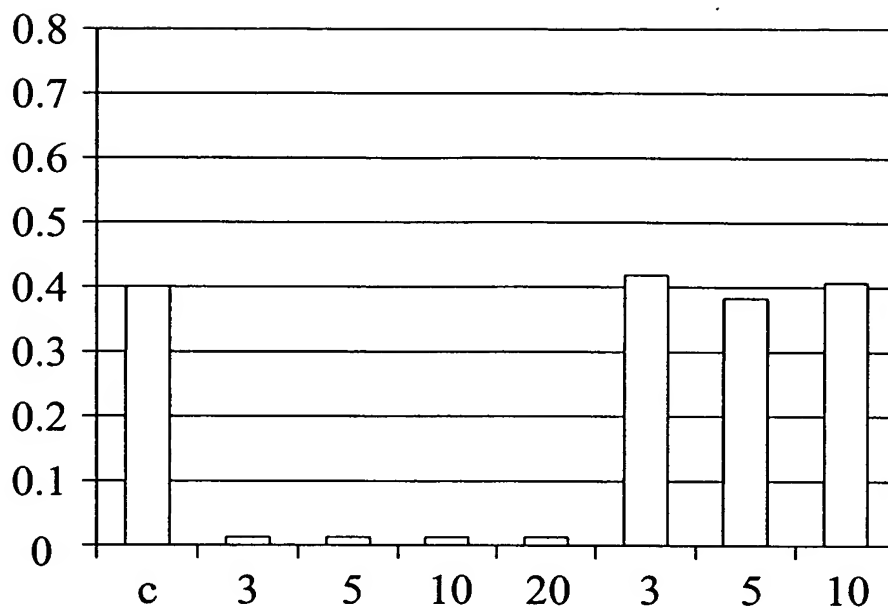


FIG. 18B

B. Protein concentration

C. wheat germ lysate control

1. 3 μ l wheat germ lysate flow through

5. 5 μ l wheat germ lysate flow through

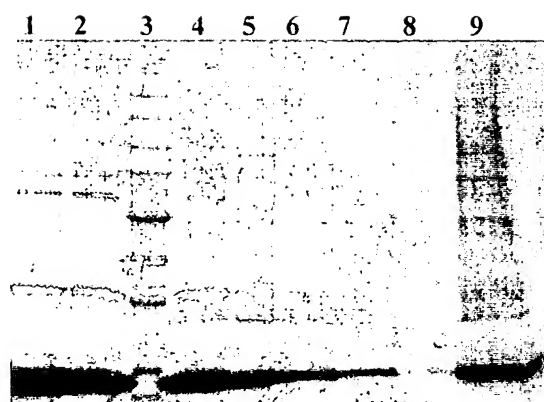
10. 10 μ l wheat germ lysate flow through

20. 20 μ l CHO cell lysate flow through

1. 1 μ l wheat germ lysate elute

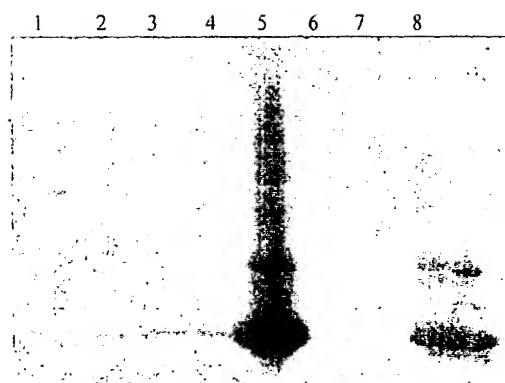
5. 5 μ l wheat germ lysate elute

10. 10 μ l wheat germ lysate elute



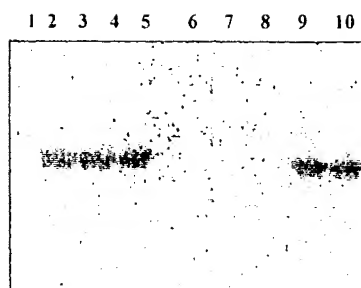
Lanes: 1. Eluted with 100 mM imidazole
2. Eluted with 200 mM imidazole
3. Marker
4. Eluted with 500 mM imidazole
5. Eluted with 1M imidazole
6. Eluted with pH 8.5 ammonium acetate
7. Eluted with pH 9.5 ammonium acetate
8. Eluted with pH 10.5 ammonium acetate
9. Eluted with pH 12.5 ammonium acetate

FIG. 19



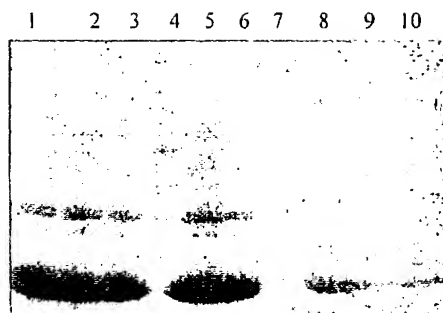
Lanes: 1. Molecular weight markers
2. Eluted with pH 8.5 ammonium acetate
3. Eluted with pH 9.5 ammonium acetate
4. Eluted with pH 10.5 ammonium acetate
5. Eluted with pH 12.5 ammonium acetate
6. Eluted with 0.05% TFA
7. Eluted with 0.1% TFA
8. Eluted with 1.0% TFA

FIG. 20



Lanes 1: Marker
 2: Control ovalbumin
 3: NTA-magnetic silica flow through
 4: Nickel-magnetic silica flow through
 5: Fe⁺⁺⁺-magnetic silica flow through
 6: Ga⁺⁺⁺-magnetic silica flow through
 7: NTA-magnetic silica elute
 8: Nickel-magnetic silica elute
 9: Fe⁺⁺⁺-magnetic silica elute
 10: Ga⁺⁺⁺-magnetic silica elute

FIG. 21

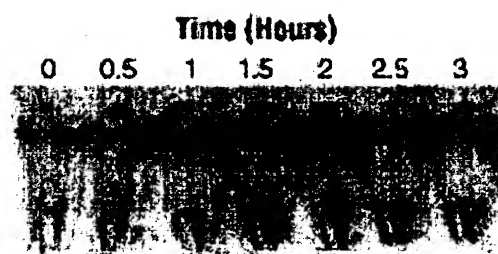


- | | |
|---|--|
| 1. Control retic lysate | 6. Fe^{2+} -magnetic silica FT |
| 2. NTA-magnetic silica FT | 7. NTA-magnetic silica 2% NH_4OH eluant |
| 3. Ni^{2+} -magnetic silica FT | 8. Ni^{2+} -magnetic silica a 2% NH_4OH eluant |
| 4. Marker | 9. Ga^{3+} -magnetic silica a 2% NH_4OH eluant |
| 5. Ga^{3+} -magnetic silica FT | 10. Fe^{3+} -magnetic silica a 2% NH_4OH eluant |

FIG. 22

FIG. 23A

A.



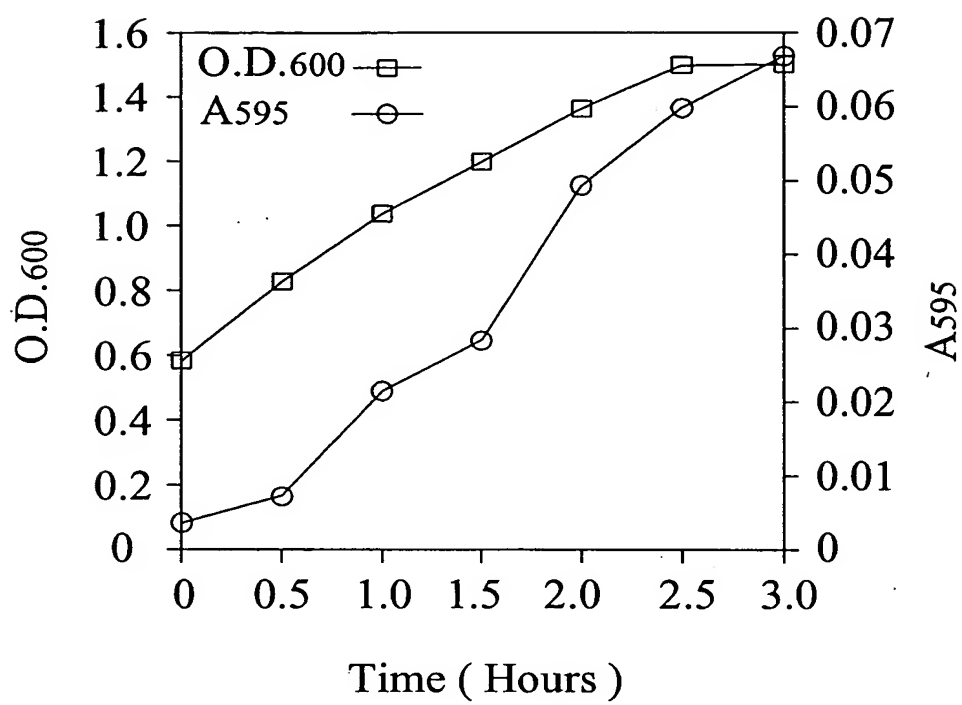


FIG. 23B

FIG. 23C

C.

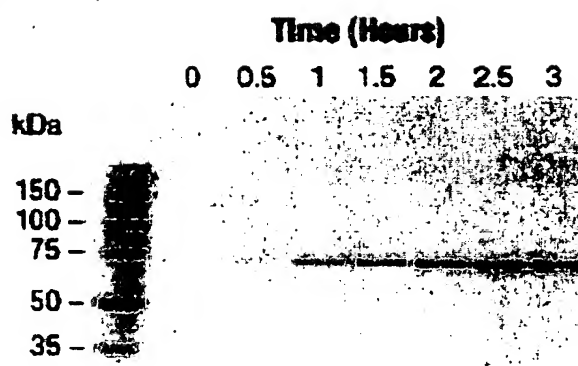


FIG. 24

1 2 3 4

